

CLAIMS

1. Device for detecting the possible presence of contamination of a container with a decorative exterior,
5 for instance provided with a labelling and/or relief patterns, for liquids such as a drink such as beer or a soft drink, comprising:

- irradiating means for irradiating the container with at least a first wavelength,
- 10 - recording means for recording a radiation sample of radiation during interaction of the radiation with at least a part of the container,
- orientation determining means for determining the orientation of the container relative to the first
15 recording means,
- comparing means for comparing the sample to a predetermined reference matching the orientation of the container relative to the first recording means during the recording.

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2. Device as claimed in claim 1, comprising second irradiating means for emitting radiation of at least a second wavelength.

25 3. Device as claimed in claim 1 or 2, comprising second recording means for determining by means of a second recording the orientation of the container relative to the first recording means on the basis of the mutual positions and orientations of the first
30 recording means, the second recording means and the container at the time of the first and second recording.

4. Device as claimed in one or more of the foregoing claims, wherein the orientation determining
35 means comprise recording means for making one or more

recordings for the purpose of determining the orientation of the container relative to the first recording means on the basis of the mutual position and orientation of the recording means and the container at
5 the time of the recording(s).

5. Device as claimed in one or more of the foregoing claims, comprising filter means for making recordings in optically independent manner with the
10 recording means on the basis of radiation of the first or of the second wavelength.

6. Device as claimed in one or more of the foregoing claims, comprising polarizing means for
15 polarizing radiation of the first and/or the second irradiating means.

7. Device as claimed in one or more of the foregoing claims, wherein the first radiation sources
20 are positioned behind the container relative to the container during making of the recording wherein the radiation irradiates the container.

8. Device as claimed in one or more of the foregoing claims, comprising selecting means for
25 selecting a part of the recording of a part of the container as assessment part, on the basis of which part the assessment is carried out.

30 9. Device as claimed in one or more of the foregoing claims, wherein the recording means comprise at least one camera.

10 Device as claimed in one or more of the foregoing claims 4-9, wherein the filter means comprise an optical filter.

5 11. Device as claimed in one or more of the foregoing claims 4-10, wherein the filter means comprise an electronic filter.

10 12. Device as claimed in one or more of the foregoing claims, further comprising composing means for composing, on the basis of the first and/or second radiation sample and/or predetermined parameters, a robust reference image or a reference image with permissible deviation values, on the basis of which
15 image acceptable deviations in the decorative exterior within a series of containers can be taken into account during selection of containers.

20 13. Device as claimed in one or more of the foregoing claims, comprising processing means for producing, on the basis of the radiation sample or the assessment part, a flat representation thereof.

25 14. Device as claimed in one or more of the foregoing claims, wherein the first comparing means are embodied in order to compare the flat representation to the robust reference image.

30 15. Device as claimed in one or more of the foregoing claims, comprising second comparing means for comparing a recording of the second recording means to a second reference image or robust reference image for the purpose of detecting deviations on the decorative exterior.

16. Device as claimed in one or more of the foregoing claims, wherein the orientation determining means determine the orientation on the basis of the recording of the second recording means.

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17. Device for detecting the possible presence of contamination of a container with a decorative exterior, for instance provided with a labelling and/or relief patterns, for liquids such as a drink such as beer,

10 comprising:

- irradiating means for irradiating the container substantially from the top or the bottom with at least a first wavelength,

- recording means for recording a radiation sample
15 of radiation after it has passed through at least one wall part of the container,

- comparing means for comparing the sample to a predetermined reference of the container relative to the first recording means during the recording.

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18. Device as claimed in claim 17, comprising measures as claimed in one or more of the claims 2-16.

19. Method for detecting the possible presence of
25 contamination of a container with a decorative exterior, for instance provided with labelling and/or relief patterns, for liquids such as a drink such as beer, comprising steps for:

- irradiating the container with radiation with at
30 least a first wavelength by means of irradiating means,

- determining the orientation of the container relative to first recording means,

- recording by means of recording means a radiation sample of the radiation after the radiation has passed
35 through at least a part of the container,

- determining the possible presence of contamination by comparing the sample to a predetermined reference matching the orientation of the container relative to the recording means,

5 - approving or rejecting the container.

20. Method as claimed in claim 19, comprising steps for determining the orientation of the container making use of radiation comprising at least a second
10 wavelength, and making a recording by means of second recording means with a sensitivity to the second wavelength.

21. Method as claimed in claim 19 or 20, wherein
15 the containers are transported by means of a conveyor past the irradiating means and the recording means.

22. Method as claimed in one or more of the foregoing claims 19-21, wherein the sample comprises an
20 image recording and the reference comprises a reference image.

23. Method as claimed in one or more of the foregoing claims 19-22, wherein two recording means make
25 a recording of the container at a predetermined angle relative to the container.